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REMARKS**RECEIVED
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The Examiner has rejected claims 5, 6, 26 and 27 under 35 U.S.C. §112, and also appears to object to the use of "specimen" and "sample" in claims 1, 2, 5, and 6. In addition, the Examiner has rejected claims 1-5, 13-18 and 26 under 35 U.S.C. §102(b) as being anticipated by Furcht U.S. Patent 6,054,277 (hereinafter "Furcht"). Further, the Examiner has rejected claim 26 under 35 U.S.C. §102(b) as being anticipated by Thundat U.S. Patent No. 6,289,717 (hereinafter "Thundat '717"). Still further, the Examiner has rejected claims 1-5, 7, 8, 13-18 and 21-26 under 35 U.S.C. §102(e) as being anticipated by Welland U.S. Publication No. 2003/0222232 (hereinafter "Welland").

The Examiner has also rejected claims 1-8 and 12-25 under 35 U.S.C. §103(a) over Thundat '717 in view of Thundat U.S. Patent No. 6,016,686 (hereinafter "Thundat '686"). Similarly, the Examiner has rejected claims 9 and 10 under 35 U.S.C. §103(a) over Welland in view Negersmith U.S. Patent No. 4,300,906 ("Negersmith"). The Examiner has also rejected claim 11 under 35 U.S.C. §102(e) over Furcht in view of Polla U.S. Patent No. 5,536,963 ("Polla").

With respect to the Examiner's rejections of claims 5, 6, 26 and 27 under Section 112, these claims have been amended to resolve the issues identified by the Examiner.

With respect to the rejection of claims 1-5, 8, 13-18 and 26 under Section 102(a) over Furcht '277, applicant respectfully traverses. Furcht teaches a testing system using

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genetic amplification in which a collection pad 32 is positioned near a reaction cocktail pouch 33. The pouch is connected to the collection pad via a tube 35 which extends parallel to the plastic strip 31. The cocktail pouch is pierced and its contents flow and immerse the collection pad 32, which provides the biochemical reaction environment that permits the nucleic acid amplification.

However, Furcht teaches nothing about the use of at least one force transducing sensor positioned to interact dynamically with said sample, nor does Furcht teach anything about detecting the dynamic interaction of the force transducing sensor with a sample whereby a characteristic of the sample can be deduced. To further clarify this point, this last recitation of claim 1 has been clarified to recite detecting the dynamic interaction of the sensor with the motion of a sample, although it is believed that this is exactly the same scope as the prior recitation of dynamic interaction. In either event, it is clear that Furcht is incapable of providing this capability, since Furcht uses an entirely different mechanism for his analysis.

As a result, Furcht fails utterly to teach the elements of the rejected claims, and therefore cannot support a Section 102 rejection. With all respect, Furcht should be withdrawn and claims 1-5, 8, 13-18 and 26 allowed over this reference.

Referring next to the rejection of claim 26 under Section 102(b) as anticipated by Thundat '717, while it is not believed that Thundat teaches anything remotely relevant to applicants' invention. Thundat teaches nothing about the dynamic interaction of

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specimens and a force transducing sensor. To further clarify, the claim now recites directing the specimens toward the surface at an angle substantially orthogonal to the surface. None of these aspects of the claim is taught by Thundat, and claim 26 should be allowed over Thundat '717.

Turning next to Welland, Publication No. 2003/0222232, the examiner has rejected claims 1-5, 7 8, 13-18, and 21-26 as anticipated under Section 102(e). Applicant respectfully traverses. In fact, Welland teaches nothing about the force sensing transducer required by Applicant's claim. Welland teaches a system in which the sample flows past the sensor in a plane substantially parallel to the sensor. Welland therefore cannot serve as an anticipation of the rejected claims, and this rejection should be withdrawn.

Turning next to the Section 103 rejections, the Examiner has rejected claims 108 and 12-25 over Thundat '717 in view of Thundat '686. However, as shown above, Thundat's '717 operates in a totally different manner. Since the Examiner has cited the second Thundat patent, the '686, only for the chamber, it is clear that no combination of the Thundat '686 and '717 patents can yield applicants' invention.

Claims 9 and 10 have been rejected under Section 103 over Welland in view of Negersmith. The Examiner asserts that Welland is relevant, but for pumping the medium at either a constant rate or with repetitive pulses, and that Negersmith adds these elements. The problem is that Welland could not work in the manner proposed by the

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Examiner, since the binding Welland seeks cannot function with either pumping or pulsing of the medium. As a result, these references cannot form a prima facie case of obviousness, and they should be allowed.

Claim 11, which depends ultimately from claim 1, is further rejected under Section 103 over Furcht '277 in view of Polla. However, as noted previously, Furcht clearly does not teach the force sensing of claim 1, and therefore cannot teach claim 11. Moreover, the Examiner has not even attempted to explain how Polla's purported microcantilevers can be combined with Furcht's device. As a result, it is clear that this rejection is ill-founded, and should be withdrawn.

Claims 27-32 have been rejected under Section 103 over Welland in view of Paritsky. However, beyond simply saying that the two patents are analogous, the Examiner has not even attempted to explain how one would convert Paritsky's system for sensing membrane deformation into a system for detecting a binding process to yield applicant's invention which requires the detection of the motion of a cantilever, among other requirements. The rejection is not well founded, and should be withdrawn.

Finally, the Examiner has rejected claims 1,3,4,7,13,16,17 and 26 on the basis of double patenting over co-inventor Ghislain's work in atomic force microscopy. With all due respect, this rejection shows how little the Examiner has reviewed applicant's invention, and his total ignorance of it. The applicant will be happy to discuss this aspect of the

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office action with the Examiner and his supervisor if the Examiner is unwilling to withdraw this rejection upon his own further consideration.

Conclusion

The claims have been amended where appropriate, and in the instance of the remaining claims the differences between the cited art and the claimed invention have been demonstrated. As a result, each of the rejections asserted by the Examiner have been overcome. The claims are believed to be in condition for allowance, and early notification to that effect is earnestly solicited.

In the event that any issue remains which the Examiner believes could be facilitated by a telephone call, he is invited to telephone the undersigned at 650-326-4350. While the undersigned would be more than happy to discuss any aspect of this case, such a telephone call is believed particularly appropriate with respect to the double patenting rejection if the examiner wishes to continue to assert it.

Respectfully submitted,



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